



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/817,963

03/27/2001

Klaus Lowack

GR 00 P 1583

9891

27346 7590 03/25/2008
LERNER GREENBERG STEMER LLP
FOR INFINEON TECHNOLOGIES AG
P.O. BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS LOWACK, GUNTER SCHMID,
and RECAI SEZI

Appeal 2008-1288
Application 09/817,963
Technology Center 1700

Decided: March 25, 2008

Before PETER F. KRATZ, JEFFREY T. SMITH, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

1 This is a decision on an appeal from the Examiner's final rejection of claims 4-8, the only claims that remain pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' invention is directed to a method for the selective metallization of an insulating layer. Claim 4 is illustrative and reproduced below:

4. A process for metallizing at least one insulating layer of an electronic or microelectronic component, which comprises:

applying at least one first insulating layer to a substrate such that the first insulating layer has a thickness not greater than 50µm;

activating the first insulating layer by treatment with an activator, the activator being at least one of a gas, a liquid, a solution, and a plasma;

then after activating the entire first insulating layer, applying to the first insulating layer a second insulating layer made of a photosensitive material, and patterning the second insulating layer made of a photosensitive material; and then, after applying and patterning the second insulating layer, seeding and metallizing regions of the first insulating layer that are exposed by the patterning step.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Calabrese	US 5,468,597	Nov. 21, 1995
Greenwood	US 5,679,498	Oct. 21, 1997
Bickford	US 5,800,858	Sep. 1, 1998

Claims 4-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Calabrese in view of Greenwood and Bickford.

We REVERSE.

The Examiner takes an obviousness position premised, *inter alia*, on a determination that Calabrese does not teach using two insulation layers overlying a substrate and on a determination that Greenwood lacks a

selective plating (metallization) step following a patterning of a photo sensitive layer (Ans. 4), each of which features are required to arrive at a process according to Appellants' claimed method. After noting these alleged non-disclosures of these applied references, the Examiner asserts that:

It would have been obvious for one skilled in the art at the time the invention was made to have modified Calabrese et al. (5,468,597) process by performing the process on an insulating layer atop a substrate as evidenced by Greenwood et al. (5,679,498) or to have modified Greenwood et al. (5,679,498) process by performing a "pretreatment" step comprising pretreating/patterning as evidenced by Calabrese et al. (5,468,597) with the expectation of achieving similar results, i.e., selective metallization.

Ans. 4.

The Examiner further relies on Bickford in the stated rejection for allegedly establishing the obviousness of the claimed thickness of the first insulating layer (Ans. 4 and 5).

However, the Examiner bears the initial burden, on review of prior art or on any other ground, of presenting a prima facie case of non-patentability. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Here, the Examiner has not fairly articulated why one of ordinary skill in the art would have turned to the teachings of Greenwood with respect to producing high-density multi-layer chip carriers for a suggestion or teaching as to how the selective metallization process of Calabrese should have been modified to include another insulation layer atop the substrate thereof that is activated in a manner so as to result in a process as here claimed¹. Nor has the Examiner

¹ In this regard, we further note that the Examiner has furnished seemingly inconsistent factual assertions regarding the teachings of the references. For

proffered a persuasive rationale for the proposed addition of a pretreatment step to the high-density chip carrier formation process of Greenwood based on the teachings of Calabrese and based on the halogenated polymeric material conditioning method of Bickford (Ans. 4-5). The Examiner has not reasonably explained why the somewhat disparate methods of Bickford and Calabrese are applicable to Greenwood's process for making multi-layered integrated circuit carriers via the broadly worded assertions as to what the proposed combination of references teach (Ans. 6).

In making the assertions set forth in the Answer, the Examiner has seemingly taken a broad brush view as to the combined teachings of the references without providing persuasive reasoning premised on detailed and consistent factual findings respecting the teachings of the individual references that support the contention that the combination thereof would have led one of ordinary skill in the art to the here claimed subject matter.

In other words, the Examiner's basis for the rejection falls short of identifying a rationale that establishes that an ordinarily skilled artisan would have been led, *prima facie*, to a method corresponding to the claimed

example, the Examiner maintains that Calabrese "fails to teach performing this process comprising two insulation layers overlying a substrate" (Ans. 4). However, in responding to Appellants' argument that Calabrese does not disclose "a second insulating layer applied to the first insulating layer," the Examiner asserts that Calabrese does present a disclosure of two layers that are impliedly asserted to be insulating layers (Ans. 6; Br. 11). In the face of such inconsistency in the Examiner's factual assertions with respect to the teachings of the applied references, we cannot say the Examiner has furnished a sustainable rationale for the rejection; that is, a rejection supported by reasoning and clear, non-ambiguous fact findings that establishes a *prima facie* case of obviousness.

Appeal 2008-1288
Application 09/817,963

method based on clearly identified and associated teachings of the applied references. *See KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007).

ORDER

On this record, we reverse the Examiner's stated rejection of claims 4-8 under 35 U.S.C. § 103(a) as being unpatentable over Calabrese in view of Greenwood and Bickford.

REVERSED

PL Initial:
sld

LERNER GREENBERG STEMER LLP
FOR INFINEON TECHNOLOGIES AG
P.O. BOX 2480
HOLLYWOOD, FL 33022-2480